



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

127

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,192	02/07/2001	David Charles Adams	ADN2653P1US	9033

7590

08/06/2004

Lainie E. Parker
Akzo Nobel Inc.
Intellectual Property Department
7 Livingstone Avenue
Dobbs Ferry, NY 10522-3408

EXAMINER

LEUNG, JENNIFER A

ART UNIT	PAPER NUMBER
----------	--------------

1764

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/778,192

Applicant(s)

ADAMS ET AL.

Examiner

Jennifer A. Leung

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 10-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-12 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment submitted on May 17, 2004 has been received and carefully considered. The changes made to the Specification and Drawings are acceptable. Claims 1-12 remain active. Claims 10-12 are withdrawn from consideration. Claims 1-9 stand rejected.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, because "the additional tube" (line 2) lacks proper positive antecedent basis.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spott (DE 32 33 557) in view of Howe (US 3,682,186).

Regarding claims 1, 2 and 8, Spott (FIG. 3) discloses an apparatus comprising:
a circulation pump **52**;
a reactor tube (i.e., comprising pipe sections **56**, **57**, **58**, **62**, **63** and **64**) which connects the outlet of pump **52** to an inlet of pump **52**, wherein at least a substantial part of the reactor tube (i.e., comprising pipe section **56**) forms at least one helical coil (see FIG. 3);
at least one monomer feed and at least one feed for water phase (i.e., water soluble monomer

supplied through valved inlet **51**; page 3, lines 7+ and example on page 12); and an outlet for the discharge of a polymer emulsion (i.e., reaction product outlet **65**).

Spott further discloses launching a pig (i.e., cleaning devices **53**, **54**, **61**) through the reactor tube **56**, **57**, **58**, **62**, **63** and **64** in order to scrape and clean the interior of the reactor tube. However, Spott is silent as to the apparatus comprising a pig by-pass system having a by-pass tube for by-passing the pig **53**, **54**, **61** around the circulation pump **52**, and a pig receiving station in parallel connection with circulation pump **52** or reactor tube **56**, **57**, **58**, **62**, **63** and **64**.

Howe teaches a pig by-pass system for automatically passing a pig by a pump station in a pipeline, without disturbing the operation thereof. The by-pass system comprises a by-pass tube (i.e., the section of pipeline **32**, traversing valves **5** and **6**) for by-passing a pig (i.e., scraper or displacer sphere **14**) around a circulation pump (i.e., not shown, but located on pipelines **36**, **38** and indicated by the words "suction" and "discharge" in FIG. 1; column 3, lines 20-31) and a pig receiving station (i.e., by-pass interchange **9**; FIG. 1), integrated into the by-pass tube and in parallel connection with the circulation pump and the pipeline **36**, **38**.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to supply a pig by-pass system to the apparatus of Spott because the provision of such means would enable the pig to move past the circulation pump without disturbing the normal operation of the pump or contaminating the product stream. The by-pass system of Howe provides an automated means for moving the pig past the circulation pump, without the need for shutting down the circulation pump, manually removing the pig upstream of the pump, and manually re-inserting the pig downstream of the pump (column 1, line 26 to column 2, line 27). Furthermore, the provision of mechanical or automated means to replace manual activity is obvious. *In re Venner* 120 USPQ 192 (CCPA 1958); *In re Rundell* 9 USPQ 220 (CCPA 1931).

Regarding claims 3-5, the circulation pump **52** of Spott comprises a suction side (facing tube portion **64**; FIG. 3) and a delivery side (facing tube portion **56**; FIG. 3), wherein the part of the reactor tube between the suction and delivery sides inherently serves as the pig receiving station (i.e., the by-pass interchange **9**, as modified by Howe, above). Howe further teaches by-pass interchange **9** comprising a plurality of apertures in the form of cut-out slots (ports **43**) in fluid communication with the suction and delivery sides of the circulation pump (i.e., via header **11**), wherein the slots **43** extend substantially in the longitudinal direction of the tube (i.e., inner tube **41**) and have a width that is smaller than the width of the pig **14** (see FIG. 1).

Regarding claim 6, although the collective teachings of Spott and Howe are silent as to the width of the slot increasing downstream, it would have been obvious for one of ordinary skill in the art at the time the invention was made select an appropriate configuration for the slots in the modified apparatus of Spott, on the basis of suitability for the intended use (i.e., for achieving a given flow rate through the slot), since it has been held that changes in size involve only ordinary skill in the art, and where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claim 7, the collective teachings of Spott and Howe teach the reactor tube **56**, **57**, **58**, **62**, **63**, **64** comprises means (i.e., the pressurized flow of reaction mixture contained within the tube that propels the pig) for directing the pig **53**, **54**, **61** into the pig receiving station (i.e., the by-pass interchange **9**, as modified by Howe; FIG. 1).

Regarding claim 9, Howe further teaches a pig detector (i.e., displacer/scrapper detector switches **15**, **16**, **17**; FIG. 1, column 4, lines 20-25) for checking whether the pig **14** is present in the pig receiving station **9**. It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a pig detector to the modified apparatus of Spott because

Art Unit: 1764

the detectors would enable full automation of the pig by-pass process, by signaling the opening and closing of valves for directing the flow of fluid or the pig through the reactor tube and/or by-pass tube, as taught by Howe.

Response to Arguments

4. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection, as necessitated by amendment.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Gentry, Jr. and Webb are provided to further illustrate the state of the art of pipeline pigging devices. In particular, both teach alternative apparatus for enabling the by-pass of pigs, spheres or other cleaning devices around pumps, compressors and other fluid handling devices placed at certain intervals in a fluid pipeline.

* * *

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

As set forth in 37 CFR 1.136(a), a shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX

Art Unit: 1764


MONTHS from the date of this final action.

* * *

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is (571) 272-1449. The examiner can normally be reached on 8:30 am - 5:30 pm M-F, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer A. Leung
July 29, 2004 



HIEN TRAN
PRIMARY EXAMINER